

CLAIMS:

1. A plate-making method comprising the steps of:
preparing a photosensitive plate-making material;
scanning said photosensitive plate-making material by
5 using modulated laser light so as to record an image on said
photosensitive plate-making material, said laser light
including ultra-short pulse laser light which causes
photopolymerization reaction by a multiple photon absorption
phenomenon at a laser-light-irradiated portion of said
10 photosensitive plate-making material; and
developing said image recorded on said photosensitive
plate-making material.
2. A plate-making method according to claim 1 wherein:
a pulse width of said ultra-short pulse laser light is
15 not longer than 10ps.
3. A plate-making method according to claim 1 wherein:
a wavelength of said ultra-short pulse laser light is not
longer than 800nm; and
a photosensitive wavelength of said photosensitive
20 plate-making material is not longer than 400nm.
4. A plate-making method according to claim 1 wherein:
said photosensitive plate-making material includes a
photosensitive layer made of photopolymer on a supporting
member.
- 25 5. A plate-making method according to claim 2 wherein:

said photosensitive plate-making material includes a photosensitive layer made of photopolymer on a supporting member.

6. A plate-making method according to claim 3 wherein:

5 said photosensitive plate-making material includes a photosensitive layer made of photopolymer on a supporting member.

7. A plate-forming apparatus for scanning a photosensitive plate-making material by using modulated laser light to record
10 an image on said photosensitive plate-making material, comprising:

a light source for generating laser light including ultra-short pulse laser light which causes photopolymerization reaction by a multiple photon absorption phenomenon at a
15 laser-light-irradiated portion of said photosensitive plate-making material;

a light modulator for modulating said laser light generated by said light source; and

a light scanning mechanism for scanning said laser light
20 modulated by said light modulator.

8. A plate-making apparatus according to claim 7 wherein:

a pulse width of said ultra-short pulse laser light is not longer than 10ps.

9. A plate-making apparatus according to claim 7 wherein:

25 a wavelength of said ultra-short pulse laser light is not

longer than 800nm; and

a photosensitive wavelength of said photosensitive plate-making material is not longer than 400nm.

10. An image recording material comprising:

5 a photosensitive film made of a photopolymer photosensitive material, for causing photopolymerization reaction by a multiple photon absorption phenomenon when recording laser light is irradiated onto said photosensitive film; and

10 a filter film formed on said photosensitive film, for cutting off such light having a wavelength shorter than that of said recording laser light.

11. An image recording material according to claim 10 wherein:

15 a wavelength of said recording laser light is not longer than 800nm; and

a photosensitive wavelength of said photopolymer photosensitive material is not longer than 400nm.

12. An image recording material according to claim 10
20 wherein:

said photopolymer photosensitive material includes high-sensitive photopolymer for a printing CTP (computer-to-plate) system.

13. An image recording material according to claim 11
25 wherein:

said photopolymer photosensitive material includes high-sensitive photopolymer for a printing CTP (computer-to-plate) system.